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To the Director, U.S. Patent and Trademark Office: Please record the attached original documents or copy thereof.

Name of conveying party(ies): (List using letters or numbers for multiple parties)	Name and address of receiving party(ies):
	Name: Samsung Electronics Co., Ltd.
or numbers for multiple parties) 1. Harkirat Singh 2. Julan Hsu 3. Chiu Ngo	Address: 416 Maetan-3Dong, Yeongtong-Gu, Suwon City, Gyeonggi-Do, 443-742, REPUBLIC OF KOREA
3. Chia Ngo	
Additional name(s) of conveying party(ies) attached?	Additional name(s) of receiving party(ies) attached? () Yes (X) No
() Yes (X) No	
3. Nature of conveyance: (X) Assignment () Security Agreement () Merger () Change of Name () Other:	4. US or PCT Application number(s) or US Patent
Execution Date: (List as in section 1 if multiple	number(s):
signatures) 1. March 9, 2010 2. March 9, 2010 3. March 9, 2010	(X) Patent Application No.: 12/721,340 Filing Date: March 10, 2010
5. March 9, 2010	Additional numbers attached?
	() Yes (X) No
Party to whom correspondence concerning document should be mailed:	Total number of applications and patents involved: 1
Customer No. 70,590	
Address: Knobbe, Martens, Olson & Bear, LLP 2040 Main Street, 14 th Floor Irvine, CA 92614 Return Fax: (949) 760-9502 Attorney's Docket No.: SAMINF.211A	
7. Total fee (37 CFR 1.21(h)): \$40	8. Deposit account number: 11-1410
(X) Authorized to be charged to deposit account	Please charge this account for any additional fees which may be required, or credit any overpayment to this account.
Statement and signature.	
To the best of my knowledge and belief, the foregoing information is true and correct, and any attached copy is a true copy of the original document.	
Seokhyun yoon Name of Person Signing	ature March 11, 2010 Date
65,103 Registration No.	
Total number of pages including cover sheet, attachments and document: 5	
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PATENT

REEL: 024072 FRAME: 0521

Serial No.: 12/721,340 Filing Date: 3-10-2010

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ASSIGNMENT

WHEREAS, Harkirat Singh, an India citizen, residing at 1940 Don Avenue #1, Santa Clara, CA 95050; Julan Hsu, a Taiwanese citizen, residing at 14285 Lutheria Way, Saratoga, CA 95070; and Chiu Ngo, a USA citizen, residing at 227 Montice o Street, San Francisco, CA 94132, (individuals hereinafter "ASSIGNOR") invented certain new and useful improvements, technology, inventions, developments, ideas or discoveries related to SYSTEM AND METHOD FOR POWER SAVING BY COORDINATED WAKE-UP IN A WIRELESS MULTI-BAND NETWORK (collectively hereinafter referred to as the "Work") for which an application for Letters Patent in the United States has been prepared for filing with the United States Patent and Trademark Office (hereinafter the "Application"); and we hereby authorize and request the attorneys of Knobbe, Martens, Olson & Bear, LLP, Customer No. 70,590, to insert here in parentheses (Application Number 12/721,340, filled March 10, 2010) the filing date and application number of said application when known;

AND WHEREAS, Samsung Electronics Co., Ltd., a Korean Corporation, with its principal place of business at 416 Maetan-3Dong, Yeongtong-Gu, Suwon City, Gyeonggi-Do, 443-742, REPUBLIC OF KOREA (hereinafter the "ASSIGNEE"), desires to acquire the entire right, title, and interest in and to the Application and the Work:

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR hereby acknowledges that ASSIGNOR has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto said ASSIGNEE, its successors, legal representatives and assigns, the entire right, title, and interest throughout the world in the Application and the Work, including all provisional applications relating thereto (including but not limited to U.S. Provisional Application No. 61/244,343, filed September 21, 2009 (respectively if plural applications)), and all divisions, continuations, continuations-in-part, reissues, and reexaminations thereof, and all Letters Patent of the United States which may be granted thereon and all reissues and extensions thereof, and all rights of priority under International Conventions and any related Letters Patent which may hereafter be granted or filed in any country or countries foreign to the United States, all extensions, renewals and reissues thereof; and ASSIGNOR hereby authorizes and requests the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all related Letters Patent to the ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND ASSIGNOR DOES HEREBY sell, assign, transfer, and convey to ASSIGNEE, its successors, legal representatives, and assigns all claims for damages and all remedies arising out of any violation of the rights assigned hereby that may have accrued prior to the date of assignment to ASSIGNEE, or may accrue hereafter, including, but not limited to, the right to sue for, collect, and retain damages for past infringements of said Letters Patent before or after issuance.

AND ASSIGNOR DOES HEREBY covenant and agree that ASSIGNOR will communicate to said ASSIGNEE, its successors, legal representatives and assigns, any facts known to ASSIGNOR respecting the Work, and testify in any legal proceeding, assist in the preparation of any other provisional or non-provisional applications relating to the Application and the Work or any improvements made thereto, sign all lawful papers, execute and make all rightful oaths and/or declarations in connection with the Application and the Work including any improvements made thereto, any patent applications filed therefrom, and any continuing application filed from any of the aforementioned applications, and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for the Work in all countries.

PATENT REEL: 024072 FRAME: 0522 Serial No.: <u>12/721,340</u> Filing Date: <u>3-10-2010</u>

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IN TESTIMONY WHEREOF, I hereunto set my hand and seal this March, 20 10.

Harkirat Singh

PATENT

REEL: 024072 FRAME: 0523

Serial No.: 12/73/,340 Filing Date: 3-10-2010

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IN TESTIMONY WHEREOF, I hereunto set my hand and seal this $\frac{9}{10}$ day of $\frac{1}{10}$, $\frac{1}{10}$.

Julan Hsu

PATENT REEL: 024072 FRAME: 0524 Serial No.: 12/721 340 Filing Date: 3-10-2010

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IN TESTIMONY WHEREOF, I hereunto set my hand and seal this $\frac{g^{+n}}{Maxdn}$ day of $\frac{Maxdn}{n}$, $\frac{10}{n}$.

Chiu Ngo

8653541/030310

PATENT REEL: 024072 FRAME: 0525

RECORDED: 03/11/2010